

SERVICE MANUAL

732

SUBSYSTEM

PCR User Terminal

(IBM PC 300 PL)

9897 010 00455

9897 010 00535



INTRODUCTION AND TECHNICAL DATA

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## SERVICE MANUAL - SUBSYSTEM

### PCR User Terminal

Author: B. Freytag

Type No.: 9897 010 00455 PCR Basic Terminal  
Type No.: 9897 010 00535 PCR Additional Terminal

In case there are any questions concerning this manual,  
please send this LOPAD via fax to 49/(0)40/5078 2481

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P-List 9897 010 00453

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## 1. Introduction

The PCR User Terminal (USIT) controls the acquisition of Philips Computed Radiography (PCR) images which are read by Readers of the type AC3, AC3000, PCR 9000, AC 500 or AC 5000.

In order to control the operation of the subsystems of the PCR cluster, the USIT accepts the responsibility for managing the IDT interface to the PCR reader. The USIT allows the operator to define the operational parameters of the various subsystems under its control by selecting reasonable default operations where appropriate. The USIT provides also a user interface to allow the operator direct control of these operational parameters. The USIT provides the operator with a set of functions to manage the flow of patients and images within the PCR system.

For Service purposes there is the possibility to reach the service menu of the AC3 reader from the USIT's Service screen.

There are two types of PCR User Terminals available:

- Basic Terminal (belongs to a basic PCR system)
- Additional Terminal (for multiterminal / multireader installation)

### What is ...?

#### **Singleterminal Installation**

A singleterminal installation contains just one USIT. The USIT has to be configured as server.

#### **Multiterminal / Multireader Installation**

In a multiterminal / multireader installation there may be up to 7 Client and / or Reader USITS connected via Ethernet to one Server USIT.

The server holds the patient database and shares it with the clients. The server is the only USIT to receive RIS data.

## 2. Technical Data

The USIT consists of a Personal Computer, an Operation Panel and a Barcode Reader.

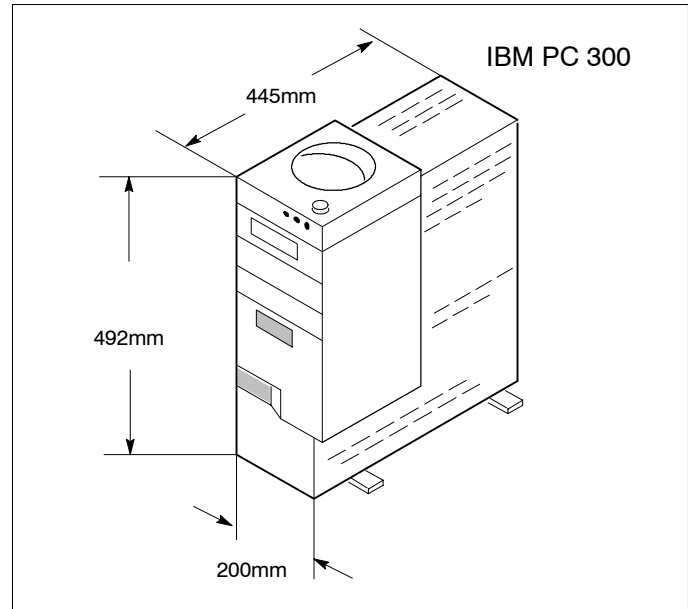
### 2.1. Computer

#### Dimensions:

492 mm x 200 mm x 445 mm (H x W x D); 17 kg

#### Features:

- PCI motherboard with
  - Min. Pentium II Processor 350 MHz
  - Min. 32 MB DRAM
  - Integrated RS-232C-compatible serial port
  - On-board Ethernet adapter (RJ-45), Standard or Fast Ethernet
- Min. 4.2 GB IDE hard disk drive
- 3.5" diskette drive
- 200 power supply (115V / 230V)
  - 115 VAC (range: 90–137 VAC, 4 A)
  - 230 VAC (range: 180–265 VAC, 2 A)
- U.S. keyboard



#### Expansion:

- Line Booster Board, amplifies the digital VGA signal of the on-board VGA board and supplies 12V for the Operation Panel.

#### Operating System:

- OS/2 Warp (IBM)

#### System BIOS

The system BIOS provides ISA and PCI compatibility. The BIOS is contained in a flash memory device on the system board. The BIOS provides the power-on self test (POST), the system Setup program, a PCI and IDE auto-configuration utility, and BIOS recovery code. BIOS features are:

- PCI Auto-configuration

The PCI auto-configuration utility works in conjunction with the Setup program to support using PCI add-in boards in the system. When you turn on the system power after installing a PCI board, the BIOS automatically configures interrupts, DMA channels, I/O space, and so on.

- IDE Auto-configuration

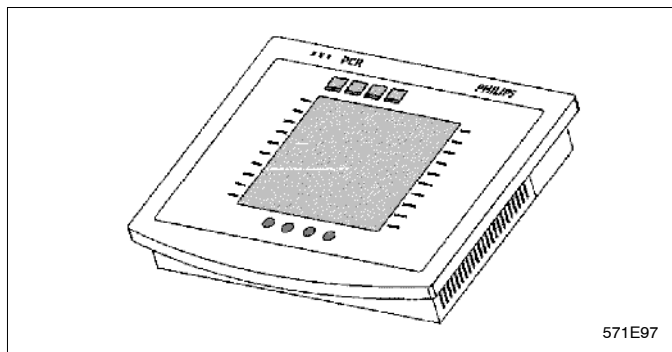
If you install an IDE drive in the system, the IDE auto-configuration utility automatically detects and configures the drive for operation in the system. This utility eliminates the need to enter the Setup program if you have replaced the hard disk.

## 2.2. Operation Panel

Dimensions:

Operation Panel 340 mm x 430 mm 60 mm; 5 kg

Monochrome Electro Luminescence Display with a VGA resolution of 640 x 480. The digital video data and the 12V DC for the Operation Panel is supplied by the PC via the 25 pole cable.



## 2.3. Barcode Reader

The Barcode Reader is needed to guarantee that the right Image Plate will be linked to the corresponding patient data.

It is connected in series to the keyboard and the buttons of the operation panel.

In conjunction with an AC3 reader it is possible to work without a barcode reader.

## INSTALLATION

### TEXT

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## 1. Introduction

This section describes the installation work of the PCR User Terminal (USIT) hardware, as-well-as any special considerations which may adversely affect the performance or operation of the system. The hardware of the USIT needs not to be configured. For configuration information on software please refer to the USIT Release Bulletin.

## 2. Site Considerations and Preparation

The system is designed to operate in a typical clinical environment.

- Choose a site that is:
  - Clean and dust-free.
  - Well ventilated and away from sources of heat including direct sunlight.
  - Isolated from strong electromagnetic fields produced by electrical devices (such as air conditioners, large fans, large electric motors, radio and TV transmitters, high-frequency security devices and other medical equipment).

The system is always delivered with an U.S. keyboard. If you need to install a keyboard with a layout different from the U.S. layout, you have to obtain the keyboard with **PS/2 connector** locally.

### 2.1. Network Installation

An Ethernet based network is required to run a PCR system. Ethernet establishes the communication between the USITs in a multiterminal installation and to EasyVision RAD.

The network material must be obtained locally. USIT and EasyVision are delivered with one STP cable (5m) each.

The installation of a network can be done by various organizations:

- By the SSD itself, when experience is obtained i.e. during training course or during other installations.
- By the customer
- By the customer who will hire a sub-contractor
- By SSD who will hire a sub-contractor.

The USIT uses the on-board Ethernet adapter with a RJ-45 (Twisted Pair) connector.

This Ethernet interface is able to work at a Standard Ethernet and at a Fast Ethernet network.



### 3. What is Delivered

The delivery of a PCR User Terminal consists of the following components:

**Hardware**

- IBM PC
- Operation Panel
- Barcode Reader (optional for an AC 3 system)

**Software**

- PCR User Terminal Software (CD-ROM, 3 Diskettes) + Release Bulletin

**Documentation**

- Service manual PCR User Terminal (Basic Terminal only)

**Options**

- Wall Mount for Operation Panel
- RIS software (1 diskette + Release Bulletin)

### 4. Unpacking and Preparation

After unpacking the system, locate the packing slip supplied with the system and make sure all items are present and in good condition. If any item is damaged or missing, contact your system supplier.

**Checking the Input Voltage Setting**

All PCR User Terminals are factory configured for 230 Vac. If you need to change the voltage setting, remove the label which covers the voltage selection switch on the computer back panel.

The switch can be used to set the AC input voltage to:

- 230 Vac (in the range of 180–265 Vac), or
- 115 Vac (in the range of 90–137 Vac)

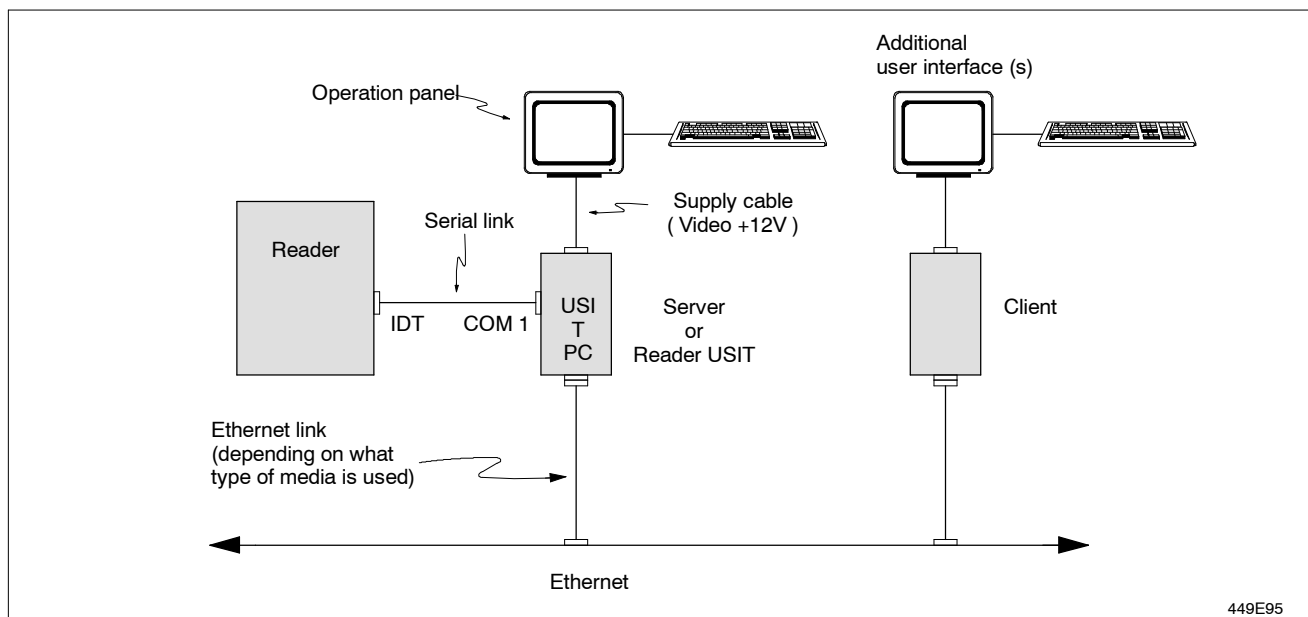
**Checking the Power Cords (for Client PCs only)**

In some cases, the power cord supplied with this system may not be compatible with the AC wall outlet in your country. If this is true, you must obtain a suitable power cord that meets the following criteria:

- The cord must be rated for use at the AC voltage available, with a current rating that is at least 125% of the current rating of the product.
- The AC plug end must be terminated in a grounding-type male plug designed for use in your country. The cord must be labeled or marked to indicate it has been certified by an agency acceptable in your country.
- The connector at the product end must be an EN60320 female connector (or the equivalent IEC 320 connector, sheets C13–14).
- The cord must be less than 4.5 m (14.8 feet) long and be created with <HAR> (harmonized) cordage.

## 5. Cabling

### 5.1. Overview



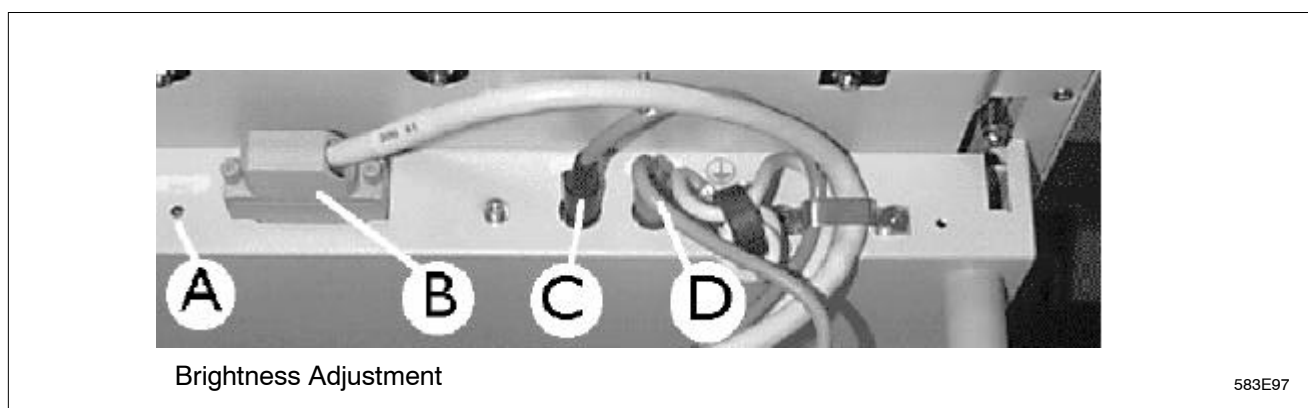
### 5.2. Connecting the Cables

1. Open the grey back cover of the operation panel by removing the two Phillips screws.

2. Connect the following cables at the operation panel:

- B: 300 X1 Line Booster cable, Sub-D 25 pins
- C: 300 X12 Keyboard cable, going to the PC
- D: 300 X11 Barcode reader and keyboard in series

⏏ Grounding cable

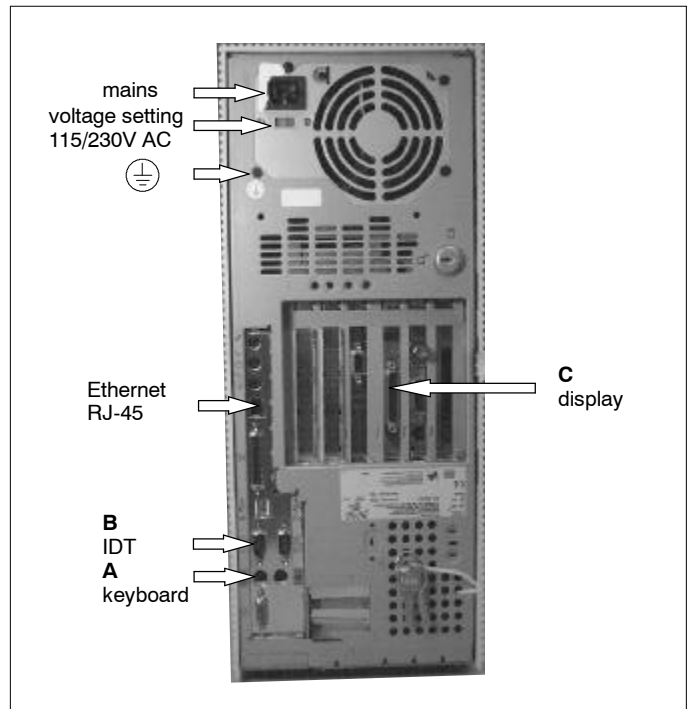


3. Fix the cables with the cable clamp, then close the cover.

4. Attach the ferrite core to the keyboard / barcode cable as shown in the figure.

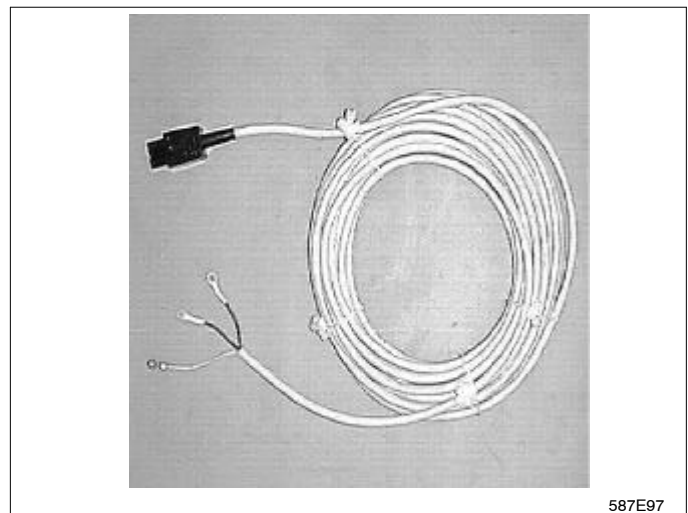


5. Connect the Operation Panel's grounding cable to the grounding screw at the computer.
6. Connect the keyboard cable of the Operation Panel to the keyboard connector of the PC **(A)**.
7. Connect the 25-pole supply cable (Video/12Vdc) to the 25-pin connector of the Line Booster Board in the PC **(C)**.
8. For a Server or Reader USIT:  
Connect the Serial Link cable (IDT connection to IP Reader) to the serial port of the PC **(B)**.



9. Locate the AC power cord:
  - for a Client: Use the standard power cord
  - for a Server or Reader USIT: Use the white, 15 meter long power cable (figure).

**This cable must be used because of EMC (Electro-Magnetic Compatibility).**



10. Connect the female end of the cord into the AC power input sockets on the back of the PC.
11. For a Client USIT: Connect the power cord to the mains power outlet.  
For a Server or Reader USIT: Connect the cable to the mains distribution panel of the IP Reader.

## 6. Power-up

### Power-up

Power-up the User Terminal by switching on the On/Off switch at the Computer .

When you boot the PCR User Terminal, a POST (Power On Self Test) checks RAM memory first, then the settings stored in CMOS RAM against the actual hardware configuration. All CMOS parameters are Factory configured.

If POST does not detect any problems the computer tries to boot-up. Since there is no software pre-installed, booting the USIT will fail.

If POST finds a problem, refer to Section *FAULT FINDING* for corrective actions.

### 6.1. Software Installation

For software installation and configuration please refer to the Release Bulletin.

### 6.2. Ethernet Board Configuration

The on-board Ethernet adapter of the PCR User Terminal has to be used. It has been activated in the BIOS of the PC by the factory. No further configuration necessary.

### 6.3. Barcode Reader Configuration

To configure the BCR, simply let the BCR read the two barcodes below. The BCR will configure itself.



Factory Default Settings



USIT Configuration

485K95

Only for PCR User Terminal software  $\leq$  1.4 L2 :

Read the next barcodes to configure the BCR for a french keyboard.

1. Enter programming mode

2. Select country code



ENTER



XVIII

3./4. Select country (France)



0



3

5. Exit programming mode



EXIT

**FAULT FINDING****TEXT**

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## 1. Fault Finding Strategy

Errors at the computer are indicated:

- with a series of beep codes, see '**Beep Codes**'
- by BIOS error codes, see '**POST Error Messages**'
- If you have both an error message and incorrect audio response, diagnose the error message first.
- If you cannot run the diagnostic tests, but did receive a POST error message, diagnose the POST error message.
- If you did not receive any error message, look for a description of your error symptoms. Check all power supply voltages before you replace the system board.

Recommendation: Use Internet of IBM: <http://www.pc.ibm.com>

Internet address for downloading the Electronic Pocket Reference Manual (EPRM):

**<ftp://ftp.pc.ibm.com/pub/pccbbs/eprm>**

Files to be downloaded:

- EPRM.INF
- EPRMA.INF
- EPRMX.INF
- EPRMNEW.INF
- WINX.EXE

After the installation of the EPRM copy your Editor program, e.g. edit.com or wordpad.exe, into the directory where you have installed the EPRM.

Change the file name of your Editor to E.EXE.

In some cases it is necessary to create with the aid of your selected Editor default text files with the name NOTE-1.TXT and EPRMNOTE.TXT.

You will find a well configured EPRM as a self-extracting file also in the PCR board of our BBS system.

### 1.1. Beep Codes

Refer to the manual "Using Your Personal Computer".

### 1.2. POST Error Messages

Refer to the manual "Using Your Personal Computer".

## 2. Problems and Suggestions

### General Checkout

- Make sure that all cables are installed correctly.
- Verify that the system board jumpers are set properly.
- Verify that your system hardware configuration is set correctly. In Setup, check the values against the system settings you recorded previously. If an error is evident (wrong type of drive specified, for example), make the change in Setup and reboot the system. Record your change.
- Make sure the software is properly configured for the system. Refer to the Release Bulletin.
- Try a different copy of the software to see if the problem is with the copy you are using.
- If you check all of the above with no success, try clearing CMOS RAM and reconfiguring the system. Make sure you have your list of system settings available to re-enter, because clearing CMOS RAM sets the options to their default values.

### Characters do not appear on the display

- Make sure the Video/12V cable of the Operation Panel is plugged in properly to the VGA board of the PC.
- Check that the brightness is properly adjusted.
- If you have replaced the Line Booster Board, is the ribbon cable plugged in the right way? Is the board plugged in properly and the screw tightened?
- If the power-on light is also off, do you hear the hard disk running? If not, the power supply may be defective or a device pulls the voltage down. Try to disconnect the Operation Panel.
- Reboot the system.

### CMOS RAM settings are wrong

If system settings stored in CMOS RAM have changed for no apparent reason (for example, the time of day develops an error), the backup battery may no longer have enough power to maintain the settings. Replace the battery.

### Diskette drive light does not go on when drive is in use or is tested by POST

- Make sure the power and signal cables for the drive are properly installed.
- Check that the drive is properly configured and enabled in Setup.

### Hard drive light does not go on when drive is in use or is tested by POST

- Make sure the power and signal cables for the drive are properly installed.
- Make sure the front panel connector is securely attached to the system board headers.
- Check that the drive is properly configured and enabled in Setup.
- Check the drive manufacturer's manual for proper configuration for remote hard disk drive activity.

**Power-on light does not go on**

- If the system is operating normally, check the connector between the system board and the front panel. If OK, the light may be defective.
- If the system doesn't work, the power supply may be defective or a device pulls the voltage down. Try to disconnect the Operation Panel.

**System halts before completing POST**

This indicates a fatal system error that requires immediate service attention. Note the screen display and write down any beep code emitted.

**System halts after completing POST (no access to hard disk)**

If OS/2 hasn't been shut down properly, maybe due to power failure or simply by switching off the USIT without performing OS/2's Shutdown procedure, Boot Sector or Partition Table may be corrupted.

If the PC stops during boot-up procedure there is no access to the Boot Sector maybe due to a corrupted Partition Table. Then you have to run the partitioning program FDISK of OS/2. Please refer to the Release Bulletin for partitioning the hard disk.

If the problem recurs, you may need to low-level format the hard disk. If the problem persists after reformatting the disk, the I/O controller on the system board may be defective: Replace the Main Board.

**Z:\ , no access to drive**

Drive Z:\ of the USIT is a logical drive which is actually linked via network to the subdirectory /easydata/UI on the EasyVision.

If you got within the USIT application software a message telling you that there is no access to drive Z:\ then you got the following possibilities for this mal function:

- Network connection lost (USIT, EasyVision)
- EasyVision is not running
- Network configuration is wrong (USIT)
- Subdirectory on EasyVision corrupted.



### 3. USIT Runtime Error Codes

Each USIT task has a certain range of error numbers which are defined in the following lists.

The error code is given first, followed by the display text and an action code. At runtime, the tokens represented by "\$" will be replaced by strings.

#### Action Codes

- 1000 Record error code, error text, and actions performed before error appeared.
- 1001 This message is presented for information only. No action is necessary.
- 1002 If error occurs frequently, record error code, error text, and actions performed before error appeared, and notify Service.
- 1003 If error cannot be corrected, record error code, error text, and actions performed before error appeared, and notify Service.
- 1004 Record error code, error text, and actions performed before error appeared, and notify Service immediately.
- 1005 Do not continue to use system. Record error code and text and last actions performed and notify Service.
- 1006 Correct any invalid data. For more information, contact Service.
- 1007 Make sure device is on. Check cable between terminal and device. If connection is bad, shut both down, fix connection, and restart.
- 1040 Reader console emulation error. Record error code, error text, and last actions performed.
- 1041 Reader console emulation event. This message is presented for information only. No action is necessary.
- 1042 Reader console emulation error. If error occurs frequently, record error code, error text, and last actions performed. Notify Service.
- 1043 Reader console emulation error. If error cannot be corrected, record error code, error text, and last actions performed. Notify Service.
- 1044 Reader console emulation error. Record error code, error text, and last actions performed. Notify Service immediately.
- 1045 Reader console emulation error. Do not continue to use system. Record error code and text and last actions performed. Notify Service.
- 1046 Reader console emulation error. Correct any invalid data. For more information, contact Service.
- 1047 Reader console emulation error. Make sure AC3 reader is on. Check cable between terminal and AC3 reader. If problem persists, notify Service.
- 1050 CTree database error. Record error code, error text, and last actions performed.
- 1051 CTree database event. This message is presented for information only. No action is necessary.
- 1052 CTree database error. If error occurs frequently, record error code, error text, and last actions performed. Notify Service.
- 1053 CTree database error. If error cannot be corrected, record error code, error text, and last actions performed. Notify Service.
- 1054 CTree database error. Record error code, error text, and last actions performed. Notify Service immediately.
- 1055 CTree database error. Do not continue to use system. Record error code and text and last actions performed. Notify Service.
- 1056 CTree database error. Correct any invalid data. For more information, contact Service.
- 1060 DBS database error. Record error code, error text, and last actions performed.
- 1061 DBS database event. This message is presented for information only. No action is necessary.
- 1062 DBS database error. If error occurs frequently, record error code, error text, and last actions performed. Notify Service.
- 1063 DBS database error. If error cannot be corrected, record error code, error text, and last actions performed. Notify Service.
- 1064 DBS database error. Record error code, error text, and last actions performed. Notify Service immediately.
- 1065 DBS database error. Do not continue to use system. Record error code and text and last actions performed. Notify Service.
- 1066 DBS database error. Correct any invalid data. For more information, contact Service.
- 1067 DBS database warning. Go to Image Options screen to verify desired export destinations.
- 1070 EasyVision server error. Record error code, error text, and last actions performed.
- 1071 EasyVision server event. This message is presented for information only. No action is necessary.
- 1072 EasyVision server error. If error occurs frequently, record error code, error text, and last actions performed. Notify Service.
- 1073 EasyVision server error. If error cannot be corrected, record error code, error text, and last actions performed. Notify Service.
- 1074 EasyVision server error. Record error code, error text, and last actions performed. Notify Service immediately.
- 1075 EasyVision server error. Do not continue to use system. Record error code and text and last actions performed. Notify Service.
- 1076 EasyVision server error. Correct any invalid data. For more information, contact Service.
- 1077 EasyVision server communication error. Make sure EasyVision is on. Check cable between terminal and EasyVision. If problem persists, notify Service.
- 1080 Image plate reader server error. Record error code, error text, and last actions performed.
- 1081 Image plate reader server event. This message is presented for information only. No action is necessary.
- 1082 Image plate reader server error. If error occurs frequently, record error code, error text, and last actions performed. Notify Service.
- 1083 Image plate reader server error. If error cannot be corrected, record error code, error text, and last actions performed. Notify Service.
- 1084 Image plate reader server error. Record error code, error text, and last actions performed. Notify Service immediately.

- 1085 Image plate reader server error. Do not continue to use system. Record error code and text and last actions performed. Notify Service.
- 1086 Image plate reader server error. Correct any invalid data. For more information, contact Service.
- 1087 Image plate reader communication error. Make sure reader is on. Check cable between terminal and reader. If problem persists, notify Service.
- 1088 Image plate reader server error. The configured ID at the reader must be unique system-wide, and match the one at the PCR User Terminal.
- 1089 This message reflects a request from the AC3 Image Plate Reader. Call Service if message is frequent.
- 1090 Image plate transaction error. Record error code, error text, and last actions performed.
- 1091 Image plate transaction event. This message is presented for information only. No action is necessary.
- 1092 Image plate transaction error. If error occurs frequently, record error code, error text, and last actions performed. Notify Service.
- 1093 Image plate transaction error. If error cannot be corrected, record error code, error text, and last actions performed. Notify Service.
- 1094 Image plate transaction error. Record error code, error text, and last actions performed. Notify Service immediately.
- 1095 Image plate transaction error. Do not continue to use system. Record error code and text and last actions performed. Notify Service.
- 1096 Image plate transaction error. Correct any invalid data. For more information, contact Service.
- 1100 Module intercommunication error. Record error code, error text, and last actions performed.
- 1101 Module intercommunication event. This message is presented for information only. No action is necessary.
- 1102 Module intercommunication error. If error occurs frequently, record error code, error text, and last actions performed. Notify Service.
- 1103 Module intercommunication error. If error cannot be corrected, record error code, error text, and last actions performed. Notify Service.
- 1104 Module intercommunication error. Record error code, error text, and last actions performed. Notify Service immediately.
- 1105 Module intercommunication error. Do not continue to use system. Record error code and text and last actions performed. Notify Service.
- 1106 Module intercommunication error. Correct any invalid data. For more information, contact Service.
- 1110 User interface error. Record error code, error text, and last actions performed.
- 1111 User interface event. This message is presented for information only. No action is necessary.
- 1112 User interface error. If error occurs frequently, record error code, error text, and last actions performed. Notify Service.
- 1113 User interface error. If error cannot be corrected, record error code, error text, and last actions performed. Notify Service.
- 1114 User interface error. Record error code, error text, and last actions performed. Notify Service immediately.
- 1115 User interface error. Do not continue to use system. Record error code and text and last actions performed. Notify Service.
- 1116 User interface error. Correct any invalid data. For more information, contact Service.
- 1120 RIS server error. Record error code, error text, and last actions performed.
- 1121 RIS server event. This message is presented for information only. No action is necessary.
- 1122 RIS server error. If error occurs frequently, record error code, error text, and last actions performed. Notify Service.
- 1123 RIS server error. If error cannot be corrected, record error code, error text, and last actions performed. Notify Service.
- 1124 RIS server error. Record error code, error text, and last actions performed. Notify Service immediately.
- 1125 RIS server error. Do not continue to use system. Record error code and text and last actions performed. Notify Service.
- 1126 RIS server error. Correct any invalid data. For more information, contact Service.
- 1127 RIS server error. Make sure RIS is on. Check cable between terminal and RIS. If problem persists, notify Service.
- 1130 Utility error. Record error code, error text, and last actions performed.
- 1131 Utility event. This message is presented for information only. No action is necessary.
- 1132 Utility error. If error occurs frequently, record error code, error text, and last actions performed. Notify Service.
- 1133 Utility error. If error cannot be corrected, record error code, error text, and last actions performed. Notify Service.
- 1134 Utility error. Record error code, error text, and last actions performed. Notify Service immediately.
- 1135 Utility error. Do not continue to use system. Record error code and text and last actions performed. Notify Service.
- 1136 Utility error. Make sure device is on. Check cable between terminal and device.
- 1137 Utility error. Correct any invalid data. For more information, contact Service.
- 1180 Link plate to an exam before inserting it in the reader.
- 1181 Choose OK button or scan barcode on plate before inserting plate in the reader.
- 1182 Scan barcode on plate before inserting it in the reader.
- 1183 Data for patient is incorrect. Please correct it.
- 1184 Terminal/system configuration should be updated. Record error code and text and notify field service.

## Database Server DBS

5000	Database error code \$
5002	Duplicate record found.
5003	Delete error, pointer mismatch.
5004	Delete error, key not found.
5005	Delete-build error, duplicate keys.
5006	Jump table error for ctree() function.
5010	Initialize tree error, not enough room.
5011	Bad initialize tree parameters.
5012	Could not open index file.
5013	Unknown file type.
5014	File corrupt at open.
5015	File has been compacted.
5016	Could not create index file.
5017	Could not create data file.
5018	Index file already exists.
5019	Data file already exists.
5020	Key length too large.
5021	Record length too small.
5022	File number out of range.
5023	Illegal index member information.
5024	Could not close file.
5025	Bad link in deleted node list; rebuild file.
5026	File number not active.
5027	Data record position invalid.
5028	Zero record number in add key.
5029	Zero record number in data file routine.
5030	Record number exceeds logical end of file.
5031	Flag not set on record in delete.
5032	Attempt to delete record twice.
5033	Invalid null pointer.
5034	Index error; rebuild index.
5035	Seek error.
5036	Read error.
5037	Write error.
5038	Virtual to actual open error.
5039	No more records available.
5040	Key record size in open index too large.
5041	Could not unlock data record.
5042	Could not get C-Tree lock.
5043	Index file version incompatible.
5044	Data file serial number overflow.
5045	Key length exceeds maximum.
5046	File number already in use.
5047	C-tree not initialized.
5048	File mode incompatibility.
5049	Could not save file.
5050	Could not lock node.
5051	Could not unlock node.
5052	Variable length keys disabled.
5053	Variable length records disabled.
5054	Write failed -- read only file.
5055	File deletion failed.

5056 File must be opened exclusive.  
5057 Server lock error.  
5058 LoadKey called with incorrect key number; cannot continue.  
5059 LoadKey called with key out of order; may skip key and continue.  
5060 The percent parameter must be between and 100 inclusive.  
5061 NULL fcb detected during I/O. 1002  
5062 File must be opened exclusively.  
5063 Start file / log file serial number error.  
5064 File name too long in log file.  
5065 Not enough memory during recovery.  
5066 Logfile entry failed to find checkpoint.  
5067 Could not rename file.  
5068 Could not allocate block for control list.  
5069 Node does not belong to index.  
5070 Transaction already pending.  
5071 No active transaction.  
5072 No space for shadow buffer.  
5073 LOGFIL encountered during shadow only.  
5074 Recovery: two active transactions for user.  
5075 Bad transaction owner.  
5076 Bad transaction type.  
5077 Recovery: file name too long.  
5078 Transaction abandoned: too many log extents.  
5079 Could not log file open/create/close/delete.  
5080 NULL target or bad key number.  
5081 Transaction allocation error.  
5082 User allocation error.  
5083 ISAM allocation error.  
5084 Maximum users exceeded.  
5085 Attempt to reduce write lock to read lock .  
5086 Deadlock detected.  
5087 System not quiet: files in use.  
5088 Linked list memory allocation error.  
5089 Memory allocation during transaction processing.  
5090 Could not create queue.  
5091 Queue write error.  
5092 Queue memory error during write.  
5093 Queue read error.  
5094 Pending error: cannot save or commit transaction.  
5095 Could not start task.  
5096 Start-file / log open error.  
5097 Bad user handle.  
5098 Bad transaction mode.  
5099 Transaction type / mode conflict.  
5100 No current record for ISAM database.  
5101 Database record not found.  
5102 Could not open ISAM parameter file.  
5103 Parameter file not valid.  
5104 Too many files in parameter file.  
5105 Unable to undo. Rebuild files.  
5106 Bad data record in parameter file.  
5107 Too many keys for data file.  
5108 Bad key number for index member.

- 5109 Too many key segments.
- 5110 Could not read segment record.
- 5111 Could not read index record.
- 5112 Lock enable found pending lock.
- 5113 Lock table full.
- 5114 First byte of fixed-length data record equals delete flag.
- 5115 Key segments do not match key length.
- 5116 Bad ISAM parameter.
- 5117 Could not read index member record.
- 5118 Next set called before first set.
- 5119 First set called with wrong key type.
- 5120 Not enough memory for rebuild.
- 5121 Not enough space for sort area.
- 5122 Attempt to change record length type.
- 5123 Bad record mark in header.
- 5124 Number of indices does not match.
- 5125 DBS already initialized.
- 5126 Bad directory path.
- 5127 Could not send request.
- 5128 Could not receive answer.
- 5129 C-Tree not initialized.
- 5130 Null file name pointer.
- 5131 File name length too long.
- 5132 No room for message buffer.
- 5133 Could not identify server.
- 5134 Could not get server message ID.
- 5135 Could not allocate application ID.
- 5136 Could not get application message status.
- 5137 Could not set application message size.
- 5138 Could not remove application message.
- 5139 Invalid file name.
- 5140 Variable record length too long.
- 5141 Message size exceeds maximum.
- 5142 Message size exceeds server maximum.
- 5143 Communications handler not installed.
- 5144 Application could not identify output queue.
- 5145 No message space. Check login.
- 5146 Unable to update free space info.
- 5147 Space to reuse not set deleted.
- 5148 Write record cannot fit record.
- 5149 Variable length less than minimum.
- 5150 Database server is shutting down.
- 5151 Could not shut down; transactions pending.
- 5152 Could not extend logfile.
- 5153 Buffer too small in read record.
- 5154 Zero length record in read record.
- 5155 Native system failure.
- 5158 Read record not set active.
- 5159 Zero record byte value.
- 5160 Multi-user interference.
- 5161 User appears inactive.
- 5162 Server has gone away.
- 5163 Server lock table full.

5164 File number out of range.  
5165 No C-tree file control block.  
5166 Server has no C-tree file control blocks.  
5167 Could not read request.  
5168 Could not send answer.  
5169 Create file already opened (in recovery).  
5170 Bad function number at server.  
5171 Application message size too big.  
5172 Could not allocate server message buffer.  
5173 Could not identify server.  
5174 Could not get server message ID.  
5175 Server could not allocate user message.  
5176 Could not get server message status.  
5177 Could not set server message size.  
5178 Unexpected file number assigned to [si] in rcv.  
5179 Server is at full capacity.  
5180 Unable to read symbolic key name.  
5181 Unable to allocate key symbol name memory.  
5182 No room for sort key.  
5183 Unable to read file field number value.  
5184 Attempt to reallocate set space.  
5185 Not enough memory for multiple sets.  
5186 Set number out of range.  
5187 Null buffer in read routine.  
5188 Null target buffer pointer.  
5189 Join to skip error.  
5190 Join to error.  
5191 Join to null fill error.  
5192 Detail for skip error.  
5193 Detail for error.  
5194 Detail for null fill error.  
5195 Unable to allocate memory for data symbol name.  
5196 Exceeded retry limit in read.  
5197 Could not get memory for IFIL block.  
5198 Improper IFIL block.  
5199 Key segment refers to schema but no schema is defined.  
5200 Error exceeds maximum C-Tree error code defined by DBS.  
6000 Unknown DBS/C-Tree error: \$.  
6001 Invalid record number retrieved from C-Tree: \$.  
6002 Database not initialized.  
6003 Attempt made to log an AC-3 error with severity not equal to EVTRPT\_AC3.  
6004 Attempt made to sort using bad criterion value: \$.  
6005 Attempt made by thread \$ to access C-Tree files opened by thread \$.  
6006 Attempt made to add record with key \$, which has already been used.  
6007 Text for code \$ is too long (\$ chars; maximum \$ chars).  
6008 No patient record is currently open.  
6009 Another patient record is open.  
6010 Active patient list unchanged.  
6011 Patient '\$' is not currently open.  
6012 Patient '\$' is already open.  
6013 Patient is locked by another user.  
6014 Unable to name temporary file.  
6015 Unable to open temporary file.

- 6016 Unable to write to temporary file.
- 6017 Database error in retrieving record number.
- 6018 Exam is in process.
- 6019 List buffer overflowed.
- 6020 Patient '\$' has no exams.
- 6021 Exam has no views.
- 6022 Patient status code is invalid (\$).
- 6023 Exam status code is invalid (\$).
- 6024 View status code is invalid (\$).
- 6025 Number of groups in database exceeds maximum (\$).
- 6026 Number of exams in group (ID: \$) exceeds maximum (\$).
- 6027 Number of EDS records in exam (ID: \$) exceeds maximum (\$).
- 6028 Attempt made to add a group beyond the maximum number (\$).
- 6029 Attempt made to add an exam to group (ID: \$) beyond the maximum number (\$).
- 6030 Attempt made to add an EDS to exam (ID: \$) beyond the maximum number (\$).
- 6031 There is no group with the specified ID (\$).
- 6032 There is no exam with the specified ID (\$).
- 6033 There is no EDS with the specified ID (\$).
- 6034 Name of group (\$) is already being used.
- 6035 Name of exam (\$) is already being used.
- 6036 Name of EDS (\$) is already being used.
- 6037 Negative sort order is not allowed.
- 6038 Anatomy list unchanged.
- 6039 Bad backup/restore set (\$); 1066
- 6040 Bad backup/restore type (\$); keyword: \$.
- 6041 Wrong number of lines in block; expected: \$, encountered: \$.
- 6042 Expected keyword (\$) not found in line (\$).
- 6043 Unknown routing type found in export resolution array.
- 6044 Automatic routing for exam specifies more destinations than the maximum limit (4). Exports: (\$). Other possibilities: (\$) and (\$). 1067
- 6045 Cannot open export definition file (\$) copied from EasyVision.
- 6046 Updated export database from EasyVision does not contain entry (\$), listed in the image routing table.
- 6047 \$ errors found while processing export definition file. Check error log for additional information.
- 6048 Invalid format found in film format file in line number \$.
- 6049 Unable to schedule exam. Patient already has maximum number of exams scheduled.
- 6050 Name of processing key (\$) is already being used.
- 6051 Invalid format found in processing key file in line beginning with the following sequence: (\$).
- 6052 EDS \$ (in exam \$) uses a processing key (\$) not found in the most recent EasyVision database.
- 6053 Processing key file contained format errors and/or failed to define processing keys found in anatomy database. Check error log for details.
- 6054 Exam \$ uses a film format (\$) that is not found in the most recent EasyVision database.
- 6055 Invalid format found in film format file in line beginning with the following sequence: (\$).
- 6056 \$ errors found while processing film format file. Check error log for additional information.
- 6057 Unable to open EasyVision film format file.
- 6058 New export definition file from EasyVision has conflicting records for export (\$).
- 6059 Unable to allocate memory for EDS usage list.
- 6060 Error occurred (record number: \$), but information could not be retrieved from error instance database.

**EasyVision Server EVS**

- 7000 Configuration file \$ is invalid. Create default file.
- 7001 Default configuration file \$ could not be created. Use program defaults.
- 7002 Error during shutdown: busy date stamp thread killed.
- 7003 Date stamp thread could not be started.
- 7004 Communication error with EasyVision. Host: \$, EV: \$, error detail: \$.
- 7005 EV file \$ not found.
- 7006 PCR User Terminal file \$ not found.
- 7007 EV file \$ could not be copied to PCR User Terminal file \$.
- 7008 PCR User Terminal file could not be copied to EasyVision file. Error info: \$. Source file: \$. Target file: \$.
- 7009 PCR User Terminal connection to EasyVision failed.
- 7010 EasyVision image data file could not be created. Error info: \$.
- 7011 EasyVision image data file could not be written. Error info: \$.
- 7012 EasyVision image data file could not be deleted. Error info: \$.
- 7013 EasyVision end-of-series file could not be created. Error info: \$.
- 7014 EasyVision end-of-series file could not be written. Error info: \$.
- 7015 Image data invalid. Contents: \$.
- 7016 Open file failed. Error info: \$.
- 7017 File could not be copied. Error info: \$. Source: \$, target: \$.
- 7018 File info could not be retrieved. Error info: \$.
- 7019 System time/date could not be retrieved and file could not be opened. Error info: \$.
- 7020 System time/date and file info could not be retrieved. Error Info: \$. File \$.
- 7021 TCP/IP access from \$ to server \$ failed: \$.
- 7022 Could not start interprocess communication.
- 7023 Could not create image info file on EV.
- 7024 Update to EasyVision export database or local image routing database caused synchronization problems. Please check details in error log.
- 7025 Update to EasyVision film formats list or local anatomy database caused synchronization problems. Please check details in error log.
- 7026 Update to EasyVision processing key list or local anatomy database caused synchronization problems. Please check details in error log.
- 7027 Unable to open file for initiating Easyvision data synchronization.
- 7028 Easyvision synchronization request type unknown. Image Plate Reader Server IPRS:
- 10000 Reader/PCR User Terminal time difference. Reader time: (\$). PCR User Terminal time (\$). 1081
- 10001 Unknown message received from the reader.
- 10002 The reader ID does not match that configured for this terminal (\$).
- 10003 Re-initialization with reader (\$) has occurred. 1081
- 10004 IPRS received bad command from application.
- 10005 IPRS received message for wrong agent.
- 10006 Button selected is invalid.
- 10007 AC-3 initialization not complete.
- 10008 Unable to request service mode on AC-3.
- 10009 Length of IPRS transmission queue to image reader exceeded limit.
- 10010 IPRS reader transmission queue is empty.
- 10011 Unable to send message. AC-3 not in service mode.
- 10012 Previous image plate was linked but not processed.
- 10013 Image reader is not AC-3.
- 10014 Plate is being erased, but previous plate/demographics association is broken.
- 10015 Attempting to link invalid barcode.
- 10016 Message is too long to send to image plate reader.
- 10017 Unable to start CSL task. Return code \$:
- 10018 Unable to open barcode definition file (\$).
- 10019 Unable to read barcode definition file (\$).
- 10020 Unable to write barcode definition file (\$).



- 10021 Communication timeout with reader. Break sent. Unable to send this message: (\$).
- 10022 Error opening IPRS configuration file.
- 10023 Image plate rejected. Unable to find image data in ITS database for plate \$. Please be sure plate is properly identified. 1180
- 10024 Image plate \$ rejected. Unable to process. See error log for details.
- 10025 The reader ID does not match that configured for this terminal (\$).
- 10026 Reader does not support MRM (\$). Plate processed with default MRM (\$). Re-configure anatomy database to remove bad MRM.
- 10027 AC3 is waiting for image plate to be identified. Choose patient/exam/view and press OK button.
- 10028 AC2 does not support High Sensitivity 2 setting. Image was processed with High Sensitivity 1.
- 10950 Timeout waiting for serial communications control. The remote device is attempting to send a message.
- 10951 Communication control permission denied.
- 10952 Communications timeout with the image reader.
- 10953 Received unexpected or invalid character.
- 10954 Timeout waiting for response from a message sent to image reader.
- 10955 Unable to successfully transmit message.
- 10956 Communications timeout between terminal and image reader.
- 10957 The message received was too long for allocated buffer.
- 10958 Received incomplete message from image reader.
- 10959 Packet received exceeds maximum packet size.
- 10960 Unknown condition on message receive.

### User Interface Manager UIM

- 19000 CSL interface call returned error \$ in file \$ at line \$.
- 19001 DBS returned error \$ in file \$ at line \$.
- 19002 ITS returned error \$ in file \$ at line \$.
- 19003 IPRS returned error \$ in file \$ at line \$.
- 19004 Error in \$; file created by DBS list call.
- 19005 Control should not reach this point (\$): file \$ at line \$.
- 19006 EVS returned error \$ in file \$ at line \$.
- 19007 Unable to start CSLC task. Return code: \$.

### AC3 Console Emulator CSL

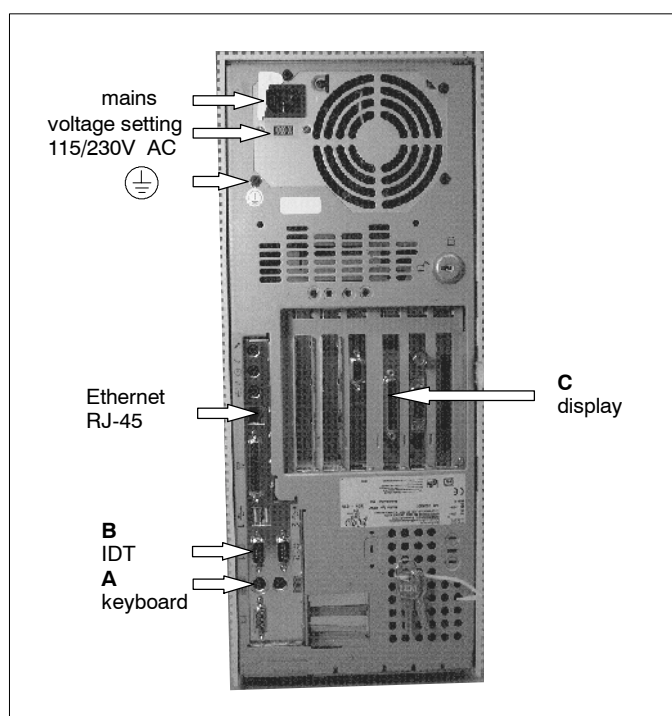
- 21000 CSL was unable to communicate with MCP at startup.
- 21001 AC3 alarm received.

### RIS Schedule Server RSS

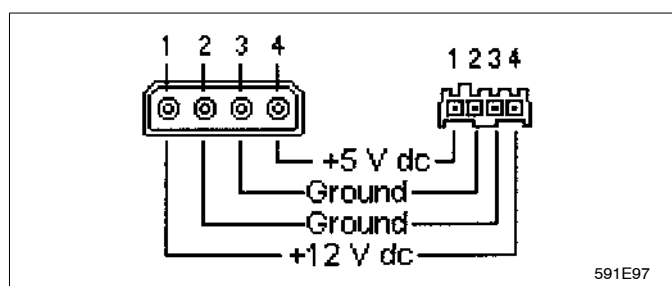
- 23000 Configuration file \$ is invalid; create default file.
- 23001 Default configuration file \$ could not be created; use program defaults.
- 23002 Could not start interprocess communication.
- 23003 Error in RIS file \$: mandatory element \$ is missing.
- 23004 File \$ cannot be scheduled.
- 23005 Length of entry \$ in RIS file \$ exceeded.
- 23006 Could not delete RIS file \$.
- 23007 Could not initialize database access.
- 23008 Patient record in use.
- 23009 Patient name of file \$ truncated.
- 23010 RIS file \$: procedure code \$ cannot be scheduled.

## 4. Connector and Feature Locations

### Back Panel Connectors and Features

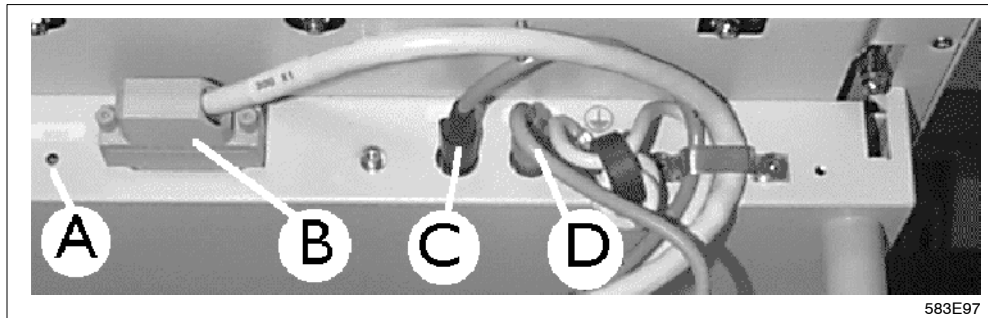


### Drive Power Connectors



## Operation Panel Connectors and Features

- A. Brightness Adjustment (Pot. meter)
- B. Supply cable (Video/12V) from PC
- C. To keyboard connector of the PC
- D. Barcode Reader and keyboard in series



### Pin assignment of the supply cable at 300X1

1, 3, 5, 15, 17, 19, 21	-	ground
7, 9, 11, 23, 25	-	+12V (4A fuse on the Line Booster)
2, 4, 6, 8, 10, 12, 14, 16	-	pixel data 0 ... 7
18	-	DAC clock
20	-	DAC blanking
22	-	horizontal sync.
24	-	vertical sync.

**REPLACEMENTS****TEXT**

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## 1. Safety Information

The procedures in this section assume familiarity with the general terminology associated with personal computers. Please pay attention to the information given in this paragraph.

- Be sure to do each procedure in the correct order.
- The procedures (and warnings) for removing and reinstalling the system covers are assumed to precede all other procedures described in this section.
- Set up an equipment log to record the system model and serial numbers, all installed options, and other information about the system. If you need this information, it will be easier to consult the log than to open up and examine the system.
- You will need a medium flat-bladed screwdriver and a Phillips screwdriver (#2 bit). We recommend that you use an antistatic wrist strap and a conductive foam pad when working on the system.

### SAFETY INFORMATION

Unplug the system before doing any of the procedures described in this section. Failure to disconnect power before you open the system or do any procedures can result in personal injury or equipment damage. Hazardous voltage, current, and energy levels are present in this product. Power switch terminals can have hazardous voltages present even when the power switch is off.

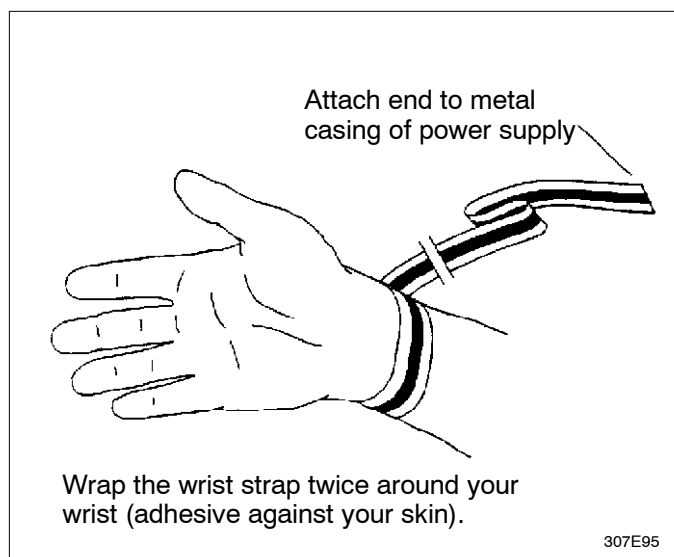
### ELECTROSTATIC DISCHARGE INFORMATION

Any computer part containing transistors or integrated circuits (ICs) should be considered sensitive to electrostatic discharge (ESD). ESD damage can occur when there is a difference in charge between objects. Protect against ESD damage by equalizing the charge so that the machine, the part, the work mat, and the person handling the part are all at the same charge.

Make sure that the ESD protective devices you use have been certified (ISO 9000) as fully effective.

When handling ESD-sensitive parts:

- Keep the parts in protective packages until they are inserted into the product.
- Avoid contact with other people.
- Use a round ground-prong of the AC plug on AC-operated computers.
- Prevent the part from touching your clothing. Most clothing is insulative and retains a charge even when you are wearing a wrist strap.
- Use the black side of a grounded work mat to provide a static-free work surface. The mat is especially useful when handling ESD-sensitive devices.
- Attach the ESD ground clip to any frame ground, ground braid, or green-wire ground.
- Use an ESD common ground or reference point when working on a double-insulated or battery-operated system. You can use coax or connector-outside shells on these systems.
- Wear a grounded wrist strap against your skin to eliminate static on your body.



## 2. Computer

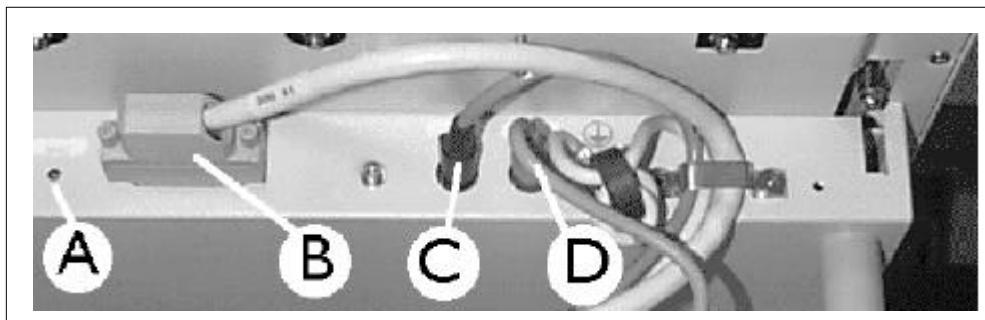
See the manual "Using your Personal Computer", which is delivered with the PC.

## 3. Operation Panel

The Operation Panel contains the following Field Replaceable Units (FRU):

- PCB User Interface
- Terminator
- Cables
- Operation Panel (complete)

### 3.1. Connector and Feature Locations

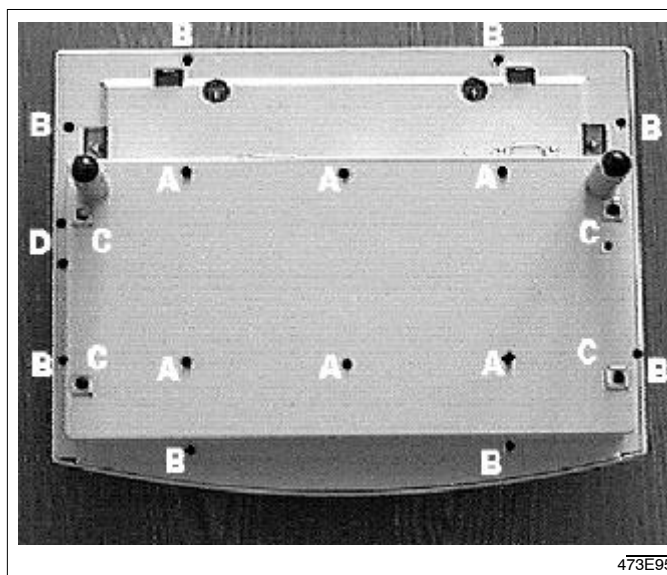


583E97

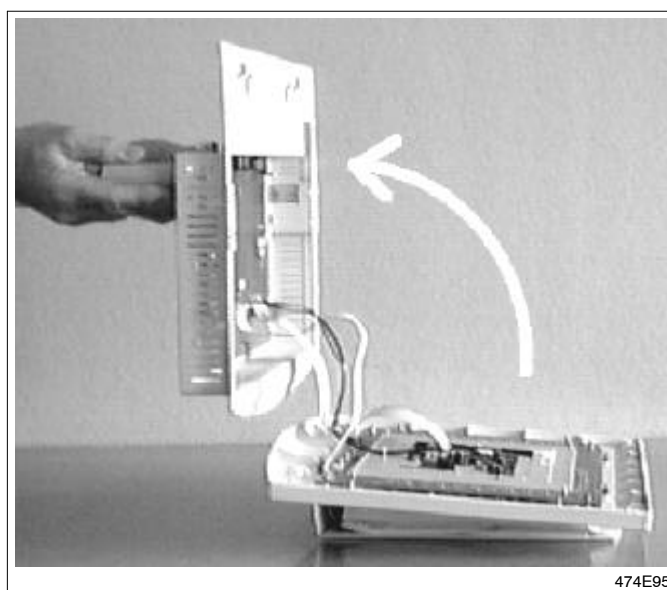
- A. Brightness Adjustment (Pot. meter)
- B. Supply cable (Video/12V) from Computer
- C. To keyboard connector of the PC
- D. Barcode reader and keyboard in series

### 3.2. Opening the Operation Panel

1. Observe the precautions in Safety Information.
2. Proceed a shutdown for the PCR User Terminal and switch it off. If the USIT is connected to a PCR reader via the Serial Link (IDT) you should also switch off the reader to prevent both systems from a serious damage.
3. If the Operation Panel is attached to a wall-mount you have to remove it by pulling the Operation Panel gently until it releases from the ball-head bolts.
4. Open the grey cable cover of the Operation Panel by removing the two screws.
5. Disconnect all cables from the Operation Panel.
6. Place the Operation Panel with the front onto a soft surface (clothes) to prevent the display from scratching its surface.
7. To open the back panel remove the 8 screws (**B**).



8. Open the housing by removing the back panel.



### 3.3. Replacing the Display

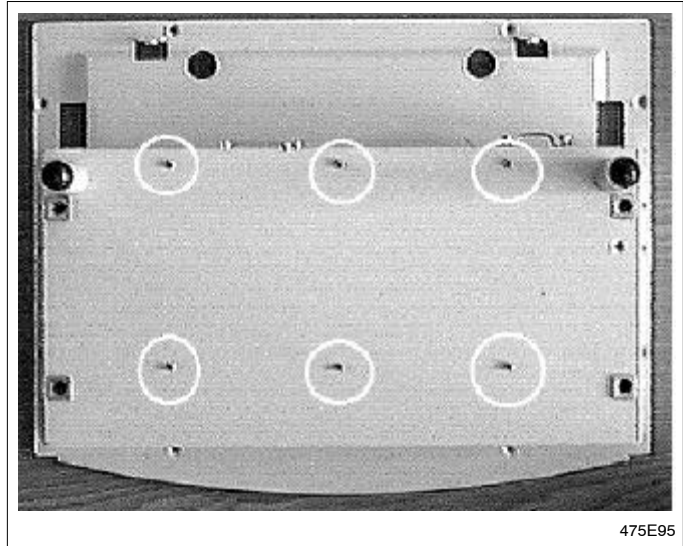
The EL-display itself is not a FRU, because it is glued to the front panel. If you have determined the display as faulty you have to replace the whole operation panel.

### 3.4. Replacing the PCBs

The spare part PCB User Interface will be delivered as one PCB which can be broken into two pieces, the back panel PCB and the front panel PCB (push buttons).

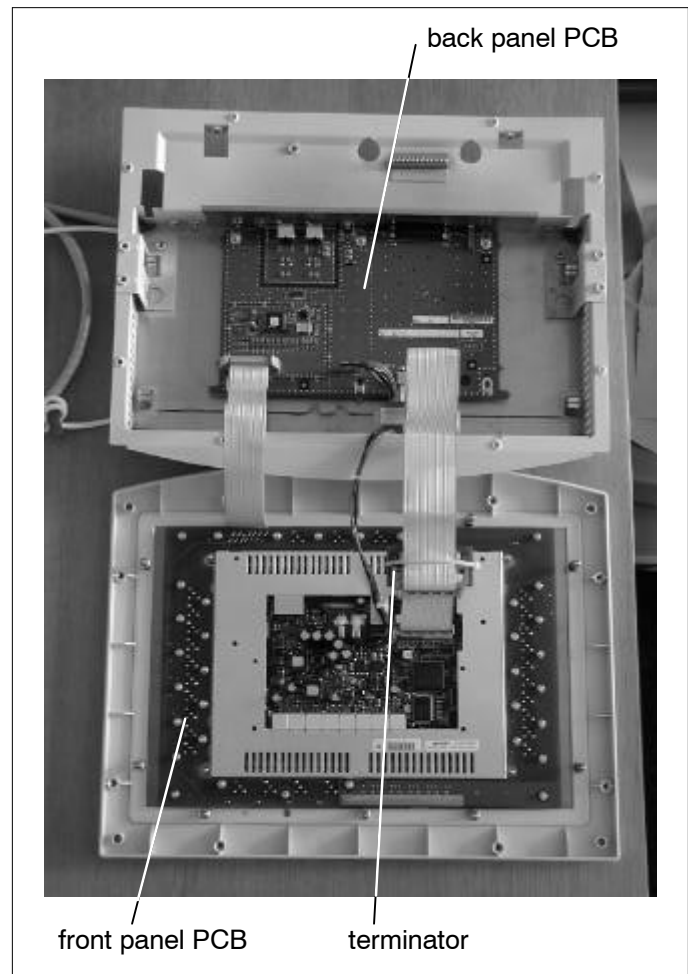
#### Back panel PCB:

- Disconnect the belonging connectors inside the Operation Panel and remove the 6 screws.



#### Front panel PCB:

- Disconnect the belonging connectors inside the Operation Panel and remove the about 30 screws.





**PROGRAMMINGS****TEXT**

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## 1. Introduction

This section describes the service and diagnostic features of the USIT.

### Note:

*The programming may vary depending on the version of the PC, of the BIOS and of the USIT software. The following information based on an IBM PC 300PL and the USIT 1.4.3.*

There are mainly two service modes:

- **Service Utilities** of the USIT software (refer to chapter 2 **Service Utilities**)
- Diagnostics via the MS-DOS bootable **Diagnostic Diskette** (refer to chapter **Diagnostic Diskette**)

There are three ways to access the service modes:

1. Diagnostics upon start-up (Startup Service Mode). In this scenario service utilities and report generation are available. The application is halted from loading until the user is finished with the service utilities. OS/2 will be running.
2. Diagnostics via the [Utilities] button within the application (Application Service Mode). In this scenario service utilities and report generation are available. The application and OS/2 will be running.
3. Diagnostics via a MS-DOS bootable Diagnostic Diskette. The application and OS/2 are not loaded.

### 1.1. Conventions used in the Text

- Text required to be input is shown in Times New Roman and Bold (e.g. : **shutdown**) in the format in which it is to be typed in (i.e. : A mixture of capital and non-capital letters)
- Computer displays / responses are shown in Courier and Bold (e.g. : **Press any key to continue**)
- File names and directories are shown in Arial and Bold (e.g. : **/user/usit**)
- Keys are shown between the < > marks (e.g. : <Enter>, <Esc>, <Y> etc.)
- Soft-Keys are shown between the [ ] brackets (e.g. : [OK], [Cancel] etc.)
- When two or more keys are to be pressed at the same time, a + sign will be used as a separator (e.g. : <CTRL> + <C>).
- Special attention to actions is preceded with the word **CAUTION** : and all text associated with the CAUTION : is in bold (e.g. : **CAUTION : Do NOT SWITCH OFF THE SYSTEM BECAUSE.....**)

## 2. Service Utilities

### To enter the Start-up Service Mode:

1. Start-up the USIT.
2. When you see the "Start-up" screen :

```
PCR . . . Starting PCR User Terminal, please wait ...
```

press **immediately** <S> followed by <Enter>.

3. When prompted for the password, type **password** <Enter>.
4. The USIT prompts:

```
Please select (L)ocal service or (S)tart PCR User Terminal
```

Type <L> and <Enter> to get the Service Menu.

### Entering Application Service Mode:

1. From the patient list window press the **[Utilities]** button
2. Select **[Service Menu]**
3. Type in the password: **password** <Enter>

The Service main menu is displayed, e.g.:

```
Welcome to the PCR User Terminal service menu
1. Reconfigure PCR User Terminal menu.
2. Backup and Restore Database menu.
3. System Reports menu.
4. Network menu.
5. OS/2 Command Shell.
6. Clear System Log.
7. Restore configuration.
8. AC3 Service terminal emulation.
Q. QUIT and start/go to application.
Please enter your selection.
```

Type your selection and press <Enter>.

The contents of the menus may vary depending on the version of the PCR User Terminal software. Take note of the Release Bulletin delivered with the software.

### 2.1. Update/Reconfigure PCR User Terminal Menu

Refer to the Release Bulletin PCR User Terminal.

### 2.2. Backup and Restore Database Menu

Refer to the Release Bulletin PCR User Terminal.

## 2.3. System Reports Menu

The user will be prompted:

```
System Reports menu
1. System Log Report.
2. System/Terminal Configuration Report.
3. Anatomy Database Report.
4. Anatomy Database Exposure Data Set (EDS) Report.
5. Procedure Code Report.
6. Image Routing Report.
7. Patient Database Report.
8. EV Reports
9. Image plate Usage Report.
Q. Return to local service menu.
Please enter your selection.
```

For each option in this menu the system will create a report and dump it in **C:\DIAGNOST\REPORTS\**

The report names are as follows:

1. System Log Report:	SYSLOG.REP	
2. System/Terminal Configuration Report:	SYSCFG.REP	
3. Anatomy Database Report:	ANADBS.REP	
4. Anatomy Database Exposure Data Set (EDS) Report:	ANAEDS.REP	
5. Procedure Code Report:	PROCOD.REP	
6. Image Routing Report:	IMROUT.REP	
7. Patient Database Report:	PATDBS.REP	
8. EV Reports:	PRINTS.REP	(film format)
	PROCESS.REP	(processing key)
	EXPORT.REP	(export)
	REPORTS.DAT	from Easy Vision
9. Image Plate Usage Report	IP_USAGE. REP	

The user will then be prompted:

```
(V)iew, (P)rint or (C)opy [report name] report to Drive A:
Please enter 'V' 'P' 'C' or 'Q' to exit.
```

Selecting <Q> returns the user to the main menu.

Selecting <V> starts an OS/2 editor called **TEDIT** and loads the file **[report name]**.

Use the <Esc> key to toggle back and forth between the file and the editor's command line.

Use the arrow keys to scroll through and view the file.

After exiting this editor the user will return to the main menu.

Since there is no printer driver implemented in the USIT software, do not use the print function.

Selecting <C> will prompt the user:

```
Insert a Formatted Floppy into drive A:
Press enter to continue.
```

Insert a formatted floppy and press <Enter>. The **[report name]** will be copied to the floppy diskette.

## 2.4. Network Menu

The user will be prompted:

```
Network service menu
1. Edit hosts file.
2. 'Ping' another unit via the ethernet.
3. Telnet.
4. FTP
5. Get network statistics.
6. Select network interface card.
7. Backup host file to floppy disk.
8. Restore host file from floppy disk.
9. Format floppy disk.
Q. Return to local service menu.
Please enter your selection.
```

### Edit hosts file

This selection will type the contents of the file to the screen.

### 'Ping' another unit via Ethernet

This selection will prompt the user:

```
Enter the logical name or IP address of the computer you want to
ping...
type 'Q' [Enter] to return to previous menu.
```

Enter the IP name (e.g. EV1) or IP address (e.g. 192.0.0.6).

The system will 'ping' the named unit 10 times and give the results on the screen.

### Note

Do type in the 'ping' command itself like: *ping 192.0.0.6*

Selecting <Q> will return the user to the main menu.

### Telnet

This selection will prompt the user:

```
Type ? at the prompt for help
Type 'quit' at the prompt to return to the network menu
Press any key when ready...
```

Press any key will start Telnet.

Type "quit" at the Telnet command prompt to return to the main menu.

### FTP

The user is prompted:

```
Type ? at the prompt for help
Type 'quit' at the prompt to return to the network menu
Press any key when ready...
```

FTP is now enabled. Type bye at the command line to return to main menu.

### Get network statistics

This selection types network statistics to the screen and return the user to the main menu.

### Select network interface card

One of the following types of Ethernet interfaces can be selected:

- 3Com 3C509 (10Mbps, RJ-45, BNC and AUI connectors)
- 3Com 3C905-TX (10 / 100 Mbps, RJ-45 connector only)
- On-board NIC (IBM PC 300PL)

### Backup host file to floppy disk

This selection will perform a directory report on the file **C:\USIT\HOSTS** and prompt the user:

**Backup hosts file above to drive A:\"  
Insert a formatted floppy diskette into the floppy diskette drive  
A:\  
and press [ENTER] to begin backup.**

Pressing <Enter> will copy the **Hosts** file to the floppy diskette.

### Restore host file from floppy disk

This selection prompts the user:

**Put the floppy diskette with the HOSTS file backup into the  
floppy diskette drive and press [ENTER].**

Pressing <Enter> will show a list with existing HOSTS files which can be restored.

### Format floppy disk

The user is prompted:

**Format floppy menu  
1. Format a 1.44M, 3.5 in. HD floppy in drive A:  
D. List files on floppy.  
Q. Return to previous menu.  
Insert a floppy disk into drive A:  
then enter your selection.**

Follow directions.

## 2.5. OS/2 command prompt

Selecting this item establishes a OS/2 command prompt full screen.

Type **exit** to return to the service main menu.

## 2.6. Clear System Log

Selecting this item clears the system error logfile.

## 2.7. AC3 Service Terminal Emulation

The AC3 terminal emulation is only available when the USIT is configured as server and configured for an AC3 Reader. The terminal emulation is not available when the service menu has been reached during start-up.

The USIT will prompt:

```

AC3 Console Display Program Version 1.1
=====
1, 2, 3, 4 : Push Button 1,2,3 or 4
S          : Enter Interactive Service Mode
E          : View AC3 Display Program Errors
Q          : Quit
            Permanent Console Display Mode

1                                                  3
=====
2                                                  4
=====

```

Entering Interactive Service Mode is allowed :

1. When the Fuji copyright notice is displayed.
2. When the Fuji Reader has finished self diagnostics ("Load Cassette Message" is displayed.)

Entering the Interactive Service Mode at any other time than described above will result in an error.

Typing <S> and <Enter> sets the **AC3** into service mode.

The interactive service mode is not running correctly when you see the message WAITING FOR TERMINAL MODE and the system seems to be stopped.

To recover from this re-start the AC3 Reader.

Upon successfully entering the Service Mode the AC3 service **main menu** is displayed:

```

CSL V1.1 Service Screen Interactive Terminal Mode
=====Enter EXIT to Quit Service Mode=====
1. Error Log Utility
2. Configure Settings
3. Date/Time Set
4. IP Handling
5. Lamp & Comm. Line Test
6. Scanner Diagnostics
7. Mech. (Motor/Sensor)
8. Image Data Line Test
9. File Operation
10. Memory Operation
11. Key Help
12. Mount B:

```

For complete instructions on how to use AC3 Service Mode, refer to the AC3 Service Manual.

To leave the interactive service mode:

- Type in <R> and <Enter> at the AC3 service main menu to set the **Reader** from service to routine mode
- Type in **EXIT** to leave the interactive service mode of the USIT

### 3. Diagnostic Diskette

The Diagnostics Diskette is a bootable disk containing a minimum MS-DOS environment. It is mainly used to run the MELCARD programming device utility and Ethernet card utilities.

When booting the USIT with the **Diagnostic Diskette** you will get the following menu:

```
PCR User Terminal
Diagnostics Menu 1.4.2
1. Goto C: \READER directory to run MELCARD utility.
2. READ ME! How to configure MELCARD device.
3. Run Ethernet card utilities for 3C509 board (10Mbps).
4. Run Ethernet card utilities for 3C90x-TX board (100Mbps).
5. Format floppy disk.
Q. Quit and go to DOS command prompt.
Please enter your selection-
```

The contents of the menu may vary depending on the version of the software.

The MELCARD utility is necessary for the reader PCR 9000, AC 3 and AC 3000.

The Ethernet card utility has only to be used for the configuration of an Ethernet board installed in an expansion slot of the PC. See next chapter.



## 4. Network- Adapter settings

### Note:

*This configuration is not necessary in case of using the on-board Ethernet adapter of the IBM PC 300PL or later models and a USIT software from 1.4.2 onwards.*

After the installation of the Etherlink III 16-bit ISA adapter board 3C509 or the Fast Etherlink 3C905-TX PCI adapter board (possible with USIT release 1.4.2 onwards) the Configuration and Diagnostic Program must be run to configure the adapter properly.

The Configuration and Diagnostic Program is part of the Diagnostic Diskette delivered with the PCR User Terminal software.

- Insert the Diagnostic Diskette into the floppy drive.
- Switch-on the PC.  
After the start-up procedure the diagnostics menu will be displayed.
- Select *Run Ethernet card utilities for...*  
The Configuration and Diagnostic Program will be started.
- Select the menu 'Install/Configure Adapter'
- Choose the following options:

#### Valid for a ISA network adapter 3C509:

I/O Base Address:	300h
Interrupt Request Level:	10
Boot PROM:	Disabled
Transceiver Type:	Auto Select *)
Network Driver Optimization:	DOS Client
Maximum Modem Speed:	9600 Baud
Plug and Play Capability	Disabled

#### Valid for a PCI network adapter 3C905-TX:

Network Driver Optimization:	Normal
Full Duplex:	Auto Select (N-WAY)
Boot PROM:	Disabled
Media Type:	Auto Select (N-WAY)
I/O Port Address:	FC80h (PCI)
Interrupt Level:	II (PCI)

- Exit the program

\*)

In case of trouble with some autosensing 100Mbps Ethernet ports it is recommended to select here the real used port of the Ethernet board, that means either 'On-board TP (RJ-45)' or 'On-board Coax (BNC)' or 'External (AUI/DIX)'.

## 5. Barcode Reader Configuration

To configure the BCR, simply let the BCR read the two barcodes below. The BCR will configure itself.



Factory Default Settings



USIT Configuration

485K95

Only for PCR User Terminal software  $\leq$  1.4 L2:

Read the next barcodes to configure the BCR for a french keyboard.

1. Enter programming mode



ENTER

2. Select country code



XVIII

3./4. Select country (France)



0



3

5. Exit programming mode



EXIT

## 6. Jumper Settings

The jumpers were set in the factory. Write down the jumper setting of a part before you are going to replace it.

## 7. BIOS Setup

The BIOS setup information is stored in CMOS RAM and is backed up by a battery when power to the system is off. The setup program makes it possible to change and store system configuration information such as the types of peripherals that are installed, the bootup sequence for the system, and enabling or disabling the system cache memory.

The BIOS setup should proper be programmed by the factory.

But, however, the possibility exists that the BIOS setup may be corrupted due to a faulty CMOS memory and messages may be displayed like **CHECKSUM ERROR**. In that case the PC prompts to run BIOS setup.

If you want to go into the Setup program, press the <F1> key when you see the message

<b>Press &lt;F1&gt; key if you want to run Setup</b>
--

The IBM Sure Path BIOS shows the following main menu:

- System Summary
- Product Data
- Devices and I/O Ports
- Start Options
- Date and Time
- System Security
- Advanced Setup
- ISA Legacy Resources
- Power Management

Those items of the menu that allow system settings are described now.

Take special note of the marked programmings (bold, underlined letters), which differ from default values.

**(1) Devices and I/O Ports**

Mouse: Not Installed

Diskette Drive A: 1,44 MB 3,5"

Diskette Drive B: Not Installed

Serial Port Setup:

Serial Port A Address: 3F8h

Serial Port A IRQ: IRQ4

Serial Port B Address: 2F8h

Serial Port B IRQ: IRQ3

USB Setup:

USB Support: **Disabled**

Parallel Port Setup:

Parallel Port: 378h

Parallel Port Mode: Extended

Parallel Port Extended Mode: **Bidirectional**

Parallel Port Extended Mode DMA: **No DMA**

Parallel Port IRQ: IRQ7

Video Setup:

Video Controller: ATI MACH 64

Video Memory: 4096 KB

Palette Snooping: Disabled

Video Interrupt: Enabled

IDE Drives Setup:

IDE Hard Disk Drive 0

Size: 4224 MB (e.g.)

IDE Performance: High Performance

IDE Read Prefetch: Disabled

IDE Hard Disk Drive 1 (not installed)

IDE CD-ROM Drive 2

IDE Performance: High Performance

IDE Hard Disk Drive 3 (not installed)

Audio Setup:

Audio Support: **Disabled**

Ethernet Setup:

Ethernet Support: **Enabled** In case of using the on-board Ethernet adapter.

Possible with USIT rel. 1.4L2 onwards.

Disabled In case of using an extra IDE or PCI Ethernet adapter.

Alert on LAN is DISABLED

**(2) Start Options**

Startup Sequence:

Primary Startup Sequence:

First Startup Device: Diskette Drive 0

Second Startup Device: Hard Disk 0

Third Startup Device: Disabled

Fourth Startup Device: Disabled

Automatic Power On Startup Sequence: Disabled

Error Startup Sequence: Primary

Keyboard Numlock State: On

Keyboard Speed: Fast

Keyboard Reset Delay: Disabled

Disketteless Operation: Disabled

Keyboardless Operation Mode: Disabled

Power On Self Test: Quick

Power On Logos: Enabled

Power On F1/Esc Options: Enabled

Power On Status: Disabled

Virus Detection: Disabled

**(3) Date and Time****(4) System Security**

Enhanced Security: DISABLED

Secure IDE Devices and Diskette Drives:

IDE Controller: Enable

Diskette Drive Access: Enable

Remote Administration: **Disabled**

Power On Password: NO PASSWORD SET

Administrator Password: NO PASSWORD SET

Adapter ROM Security: No

AssetCare: Enabled

Asset ID: Enabled

**(5) Advanced Setup**

## Cache Control:

Cache State:	Enabled with NO ECC
L2 Cache Size:	512 KB

## ROM Shadowing:

E0000h - FFFFFh:	Enabled
DC000h - DFFFFh:	Disabled
D8000h - DBFFFh:	Disabled
D4000h - D7FFFh:	Disabled
D0000h - D3FFFh:	Disabled
CC000h - CFFFFh:	Disabled
C8000h - CBFFFh:	Disabled
C4000h - C7FFFh:	Enabled
C0000h - C3FFFh:	Enabled

## PCI Control

PCI Adapter Reset:	Enabled
PCI Parity:	Enabled
PCI Bus Master...	

Network Adapters:	<b><u>Disabled</u></b>
-------------------	------------------------

In case of using the on-board or an extra IDE Ethernet adapter.

Enabled
---------

In case of using a PCI network adapter (3C 905-TX).

Mass Storage Adapters:	Enabled
------------------------	---------

Display Adapters:	Enabled
-------------------	---------

Multimedia Devices:	Enabled
---------------------	---------

Communication Adapters:	Enabled
-------------------------	---------

Serial Adapters:	Enabled
------------------	---------

## Plug and Play Control:

Set Device Node:	Enabled
Address Decode:	16-Bit
Plug and Play Operating System:	No

## Processor Control:

Processor 0ID:	0651
Processor Updating:	Enabled

**(6) ISA Legacy Resources**

## Memory Resources:

A0000h - A3FFFh:	Video
A4000h - A7FFFh:	Video
A8000h - ABFFFh:	Video
AC000h - AFFFFh:	Video
B0000h - B3FFFh:	Video
B4000h - B7FFFh:	Video
B8000h - BBFFFh:	Video
BC000h - BFFFFh:	Video

C0000h - C1FFFh:	Video BIOS
C2000h - C3FFFh:	Video BIOS
C4000h - C5FFFh:	Video BIOS
C6000h - C7FFFh:	Video BIOS
C8000h - C9FFFh:	Available
CA000h - CBFFFh:	Available
CC000h - CDFFFh:	Available
CE000h - CFFFFh:	Available
D0000h - D1FFFh:	Available

## I/O Port Resources

100h - 103h:	Available
104h - 107h:	Available
108h - 10Bh:	Available
10Ch - 10Fh:	Available
110h - 113h:	Available
114h - 117h:	Available
118h - 11Bh:	Available
11Ch - 11Fh:	Available
120h - 123h:	Available
124h - 127h:	Available
128h - 12Bh:	Available
12Ch - 12Fh:	Available
130h - 133h:	Available
134h - 137h:	Available
138h - 13Bh:	Available
13Ch - 13Fh:	Available
140h - 143h:	Available

## DMA Resources

Channel 0:	Available
Channel 1:	Available
Channel 2:	Diskette
Channel 3:	Available
Channel 4:	System Resource
Channel 5:	Available
Channel 6:	Available
Channel 7:	Available

## Interrupt Resources

0:	Timer
1:	Keyboard
2:	Interrupt Controller
3:	Serial Port B
4:	Serial Port A
5:	Available
6:	Diskette

- 7: Parallel Port
- 8: Real Time Clock
- 9: **Available** (after the ACPI BIOS mode was disabled)
- 10: Available (after the installation of ISA network board 3C509: ISA Resource)
- 11: Available
- 12: Available
- 13: Coprocessor
- 14: IDE Drives
- 15: IDE Drives

## (7) Power Management

ACPI BIOS Mode: **Disabled**

APM:

APM BIOS Mode: **Disabled**

Automatic Hardware Power Management: **Disabled**

Activity Monitor:

PS/2 Keyboard:	Enabled
PS/2 Mouse:	Enabled
Diskette:	Enabled
Serial Port A:	Enabled
Serial Port B:	Enabled
Parallel Port:	Enabled
IDE Hard Disks:	Enabled
IDE CD ROM:	Disabled

Automatic Power On:

Serial Port A Ring Detect:	Disabled
Modem Ring Detect:	<b><u>Disabled</u></b>
Wake Up on Alarm:	Disabled
PCI Wake Up:	Disabled